

NET NEUTRALITY ENFORCEMENT IS NECESSARY TO PROVIDE SMALL BUSINESSES WITH THE OPPORTUNITY FOR FAIR COMPETITION

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I. INTRODUCTION

Wendy is an upstart entrepreneur, with an idea for a unique specialty product- the widget. She begins by selling the product online, through Amazon² and Etsy,³ as a passion project in her spare time on weekends and after her full-time job. Sales start slow, but after a few months, she begins to see an uptick in orders. Soon, Wendy realizes that she can make a full-fledged career out of selling her product, so she decides to create an actual business. She searches “how to start my own company,” and in a Saturday afternoon, she incorporates her new company—Wendy’s Widgets, LLC—online.⁴

As Wendy’s Widgets expands its inventory, increases its revenue, and hires new employees, Wendy decides that it is necessary to build her brand identity, so she emails a friend from college, asking him to build her a new website. Once he finishes the work, Wendy pays for the website over PayPal.⁵ The website is a success, and with all the web traffic to her page, it becomes clear that Wendy can market and sell her Widgets directly to consumers from her website, thus cutting out the middle man. Next, she hires payment gateway provider to build a sales portal into the website, and to maintain security and prevent credit card fraud.⁶

Business is steadily growing, but Wendy thinks her Widgets would really take off if she had a bit more publicity. Wendy doesn’t want to rent a billboard or airtime on television—since she ships her Widgets

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² See GETTING STARTED WITH SELLING ON AMAZON, <https://services.amazon.com/selling/getting-started.html> (last visited Nov. 7, 2018).

³ See LEARN HOW TO SELL ON ETSY, <https://www.etsy.com/sell> (last visited Nov. 7, 2018).

⁴ See *Ohio Business Filings*, OHIO SECRETARY OF STATE, [https://bsportal.sos.state.oh.us/\(S\(1copzg3zamloj4gzc5yeajo2\)\)/default.aspx](https://bsportal.sos.state.oh.us/(S(1copzg3zamloj4gzc5yeajo2))/default.aspx) (last visited Nov. 7, 2018).

⁵ See MERCHANT SERVICES PAYPAL BUSINESS ACCOUNT –PAYPAL US, <https://www.paypal.com/us/webapps/mpp/merchant> (last visited Dec. 7, 2018).

⁶ Andrew Meola, *Here’s Your Ultimate List of Payment Gateway Providers and Key Industry Players*, BUSINESS INSIDER (Dec. 21, 2016, 5:16 PM), <https://www.businessinsider.com/list-payment-gateway-providers-2016-11>.

nationally, Wendy thinks it would be ineffective to only market them locally—so instead she hires a popular social media influencer⁷ to pitch her Widgets in his YouTube videos and on his Instagram page. Once again, sales boom. To keep up with the expanding business, Wendy subscribes to a cloud-based inventory management service through Square, allowing her to track and audit inventory, keep precise sales records, analysis stock turnover, in order to optimize her product delivery and cut costs.⁸ As her company's cash flow becomes too large for her to keep track of in Excel, Wendy subscribes to online accounting services through Xero.⁹ With the first year coming to a close for Wendy's Widgets, Wendy downloads tax software and does her personal¹⁰ and business tax returns online.¹¹

This story, of course, is a hypothetical, but it is nonetheless an illustrative (if somewhat reductive) example of how an emerging small business may find its place in today's crowded market. Despite the common perception that Main Street is dead, small businesses remain a driving national financial force and the linchpin of local economies. There are 30.2 million small businesses in the United States, representing ninety-nine percent of businesses in the nation.¹² These businesses collectively employ nearly sixty million people, or nearly half of the private sector workforce.¹³ And as much as they drive the national economy, small businesses may be even more important for

⁷ See Lauren Meltzer, *Social Media "Influencers" Add a New Twist to Advertising*, MONEYWATCH (Feb. 8, 2018, 8:27 AM), <https://www.cbsnews.com/news/social-media-influencers-brand-advertising/>.

⁸ *Inventory Management 101: How to Manage Small Business Inventory*, SQUARE, <https://squareup.com/townsquare/how-to-do-effective-inventory-management-for-small-business> (last visited Dec. 7, 2018).

⁹ See *Online Accounting Software for Your Small Business*, XERO, <https://www.xero.com/us/> (last visited Dec. 7, 2018).

¹⁰ See *E-file Options for Individuals*, IRS, <https://www.irs.gov/filing/e-file-options> (last visited Dec. 7, 2018).

¹¹ See *E-file Forms 940, 941, 943, 944 or 945 for Small Businesses*, IRS, <https://www.irs.gov/businesses/small-businesses-self-employed/e-file-form-940-941-or-944-for-small-businesses> (last visited Dec. 7, 2018).

¹² OFFICE OF ADVOCACY, U.S. SMALL BUS. ADMIN., 2018 SMALL BUSINESS PROFILE (2018), <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf> (last visited Apr. 18, 2019).

¹³ *Id.*; see also David M. Kirby, *Small Businesses Can Make a Big Impact on the Economy*, HUFFPOST (Nov. 21, 2016, 1:25 PM), https://www.huffingtonpost.com/david-m-kirby/small-businesses-can-make_b_13127000.html ("Since 1995, small businesses are responsible for paying out 44% of the total U.S. private payroll.").

the local economy.¹⁴ By creating more nearby jobs, reinvesting money, and building a tax base, small businesses elevate local economies in a way that large businesses do not.¹⁵ Since small businesses are such a vital piece of the national economy, it may be useful to examine policy proposals that will affect this sector.

In this note, the author will exam the effects that new net neutrality rules will have on small businesses. Arguments in favor of the new Federal Communications Commission (“FCC”) regulations have largely focused on the positive investment and innovation impact that deregulation has for businesses,¹⁶ while arguments against the FCC’s proposal have focused on the positive benefits of consumer regulation for end users¹⁷. However, the reality is far more nuanced. As discussed

¹⁴ *Small Business is Good for Local Economies; Big Business is Not, Researchers Say*, BUSINESS NEWS DAILY (Aug. 4, 2011, 5:30 PM), <https://www.businessnewsdaily.com/1298-small-business-good-for-economy.html>.

¹⁵ Rachel Koning Beals, *How Consumers and Communities Can Benefit From ‘Buying Local,’* U.S. NEWS & WORLD REPORT (Oct. 28, 2011, 12:00 AM), <https://money.usnews.com/money/personal-finance/articles/2011/10/28/how-consumers-and-communities-can-benefit-from-buying-local> (“Shopping at locally owned establishments can leverage community funds times three, on average. For example, by supporting a local clothing boutique, a consumer is also supporting a local attorney, tax preparer, and printer.”); J. Mariah Brown, *How Important Are Small Businesses to Local Economies?* HOUSTON CHRONICLE (Oct. 15, 2018), <https://smallbusiness.chron.com/important-small-businesses-local-economies-5251.html>.

¹⁶ See *Hearing on Oversight of the Federal Communications Commission Before the Subcomm. on Communications and Technology of the H. Comm. on Energy and Commerce*, 115th Cong. 3 (2018) [hereinafter *Oversight Hearing*] (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”); 164 CONG. REC. S2710-02 (daily ed. May 16, 2018) (statement of Sen. Cornyn), 2018 WL 2246384; Ted Cruz, Ron Johnson & Mike Lee, *Get Government Out of The Internet’s Business*, WASH. POST (May 4, 2017), https://www.washingtonpost.com/opinions/get-government-out-of-the-internets-business/2017/05/04/7e07fcda-3039-11e7-8674-437ddb6e813e_story.html?noredirect=on&utm_term=.e42d88f53dfa; Ken Engelhart, *Why Concerns About Net Neutrality Are Overblown*, N.Y. TIMES (Dec. 4, 2017), <https://www.nytimes.com/2017/12/04/opinion/net-neutrality-overblown-concerns.html>; Sen. John Thune, *I Support ‘Net Neutrality.’ Let’s Not Let ‘Political Theater’ Ruin a Bipartisan Deal*, CNBC (May 9, 2018, 9:12 AM), <https://www.cnbc.com/2018/05/09/senate-net-neutrality-bill-needs-bipartisan-support-not-political-theater.html>.

¹⁷ See, e.g., On Marketing Contributor, *The Punishing End of Net Neutrality*, FORBES (Jan. 2, 2018, 12:22 PM), <https://www.forbes.com/sites/onmarketing/2018/01/02/the-punishing-end-of-net-neutrality/#8cf061451510>; Jessica Rosenworcel, *I’m On The FCC. Please Stop Us From Killing Net Neutrality*, L.A. TIMES (Nov. 22, 2017, 4:10 PM),

above, businesses and end users can be one in the same. Additionally, natural monopoly concerns suggest that deregulation, in and of itself, is not always a desirable method of economic development. Overall, analyzing the FCC's new net neutrality regulations through the lens of small businesses reveals complex and worrying deficiencies in the regulatory framework.

First, this note will discuss the importance of internet access to small businesses, and how access has rapidly become vitally necessary over time. Next, it will cover the theory of net neutrality, as well as the history of net neutrality in the United States. Third, this note will discuss common carrier designation and natural monopolies—the economic concepts that underlay many net neutrality proposals. Fourth, it will explain why net neutrality is especially beneficial for small businesses, and the negative impacts that current federal rules may have on this sector of the economy. Next, the article will have a brief discussion on the current status of the net neutrality debate, current developments and their likely outcomes, and the implications that these outcomes may have on the political and economic near future of the country. Last, the note will conclude by analyzing potential alternatives to the current net neutrality regulation.

II. WHAT DOES THE INTERNET MEAN TO SMALL BUSINESSES?

Internet access is necessary for small businesses to stay competitive in today's economy. Retail is increasingly done online.¹⁸ Ten percent of retail sales in the United States are conducted online.¹⁹ That percentage is even greater in several major industries, such as music.²⁰ In fact, the average may be dragged down largely by food retail, for which online sales only account for two percent²¹—although this number may soon rise as well.²² Alternatively, many businesses

<https://www.latimes.com/opinion/op-ed/la-oe-rosenworcel-fcc-net-neutrality-repeal-20171122-story.html>; The Times Editorial Board, *It's Up to Congress to Save the Internet* (Jan. 17, 2018, 4:00 AM), L.A. TIMES, <https://www.latimes.com/opinion/editorials/la-ed-net-neutrality-cra-20180117-story.html>.

¹⁸ Steve Dennis, *E-Commerce May Be Only 10% of Retail, But That Doesn't Tell The Whole Story*, FORBES (Apr. 9, 2018, 1:49 PM), <https://www.forbes.com/sites/stevendennis/2018/04/09/e-commerce-fake-news-the-only-10-fallacy/#37869ba239b4>.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² See Casey Seidenberg, *Unable to Get to the Grocery Store? Here's What You Need to Know About Online Shopping and Delivery Services*, WASH. POST (Sept. 8,

have been shifting to a hybrid model that integrates an online presence with a traditional storefront, a strategy known as “bricks and clicks.”²³ This hybrid strategy has been used successfully by major brands, startups,²⁴ and even small businesses.²⁵

Even major online platforms can be a tool for small businesses to expand their customer base. Amazon, a massive online retailer often considered the epitome of big business,²⁶ doubles as a platform for independent businesses to sell their products.²⁷ This is a profitable arrangement for Amazon as well: as much as half of Amazon’s revenue come from third party sales.²⁸ Other specialized online retailers, such as Steam²⁹ and Etsy,³⁰ offer platforms for independent businesses to reach their target demographics on an unprecedented scale. Overall, the ecommerce revolution, once thought to be the death knell for small and independent businesses, just might be its savior. The so called “retail apocalypse” may level the playing field for small businesses, as the primary advantages big box stores have over so-

2018), https://www.washingtonpost.com/lifestyle/wellness/unable-to-get-to-the-grocery-store-heres-what-you-need-to-know-about-online-shopping-and-delivery-services/2018/09/17/ad15cdc4-b6b4-11e8-a2c5-3187f427e253_story.html?utm_term=.c07043bff2e2.

²³ See David S. Evans & Richard Schmalensee, *The Best Retailers Combine Bricks and Clicks*, HARV. BUS. REV. (May 30, 2016), <https://hbr.org/2016/05/the-best-retailers-combine-bricks-and-clicks>.

²⁴ Bloomberg News, *Former Online-Only Retailers Setting Up Shops in Malls Near You*, IND. BUS. J. (Oct. 22, 2018), <https://www.ibj.com/articles/70975-former-online-only-retailers-setting-up-shops-in-malls-near-you>.

²⁵ See, e.g., PURSUIT, <https://shop.pursuityourself.com/> (last visited Apr. 18, 2019). The company’s website homepage is geared towards online retail, but a brick-and-mortar store exists, and can be found at the bottom of the page.

²⁶ See Lauren Gensler, *The World’s Largest Retailers 2017: Amazon & Alibaba Are Closing In On Wal-Mart*, FORBES (May 24, 2017, 7:00 AM), <https://www.forbes.com/sites/laurengensler/2017/05/24/the-worlds-largest-retailers-2017-walmart-cvs-amazon/#5afae78120b5>.

²⁷ Amazon, *Shopping Local on Amazon: More than 300,000 U.S.-based Small and Medium-Sized Businesses Started Selling on Amazon in 2017*, BUS. WIRE (Jan. 10, 2018, 6:00 AM), <https://www.businesswire.com/news/home/20180110005439/en/Shopping-Local-Amazon-300000-U.S.-based-Small-Medium-Sized>. Amazon reports that half of items purchased on the website are from small or medium-sized businesses, and that more than 140,000 small or medium-sized businesses exceeded \$100,000 in sales on the website. *Id.*

²⁸ Jeff Spross, *The Internet Sales Tax is Going to Pummel Small Businesses*, WEEK (June 22, 2018), <http://theweek.com/articles/780427/internet-sales-tax-going-pummel-small-businesses>.

²⁹ See *Joining the Steamworks Distribution Program*, STEAMWORKS, <https://partner.steamgames.com/steamdirect> (last visited Nov. 7, 2018).

³⁰ See *supra* note 3.

called ma and pa shops, lower prices and broader inventory, are largely lost to online retail.³¹

Additionally, online platforms for independent businesses to reach customers are not even limited to retail. Many industry-specialized websites, such as Avvo,³² Angie's List,³³ or Booksy³⁴ provide integrated platforms on which customers can search and contact small and independent businesses to provide services from divorces to haircuts. These "gig economy" websites lead to an expansion in the number of independent workers who contract out their services, rather than working full-time for one employer.³⁵ Other, perhaps more ubiquitous websites, such as Uber³⁶ and Airbnb³⁷ allow individuals to take on flexible side-jobs in high-demand fields.³⁸

III. THE THEORY AND HISTORY OF NET NEUTRALITY REGULATION IN THE UNITED STATES

In its simplest terms, net neutrality is the idea that internet service providers must treat all internet traffic equally, regardless of the source or destination of the internet traffic.³⁹ Essentially, an internet service provider would not be allowed to provide differing bandwidth rates to the same customer based on the websites or content being accessed. This concept, in its broadest form, is not a novel one. Congress and the FCC have applied the same content neutral regulation to other telecommunications industries, such as telephone providers, for nearly

³¹ Joyce M. Rosenberg, *The 'Retail Apocalypse' Is Both a Blow and a Blessing for Small Businesses*, INC. (June 14, 2017), <https://www.inc.com/associated-press/retail-apocalypse-stores-closing-impact-small-business.html>.

³² *About us*, AVVO, https://www.avvo.com/about_avvo (last visited Nov. 7, 2018).

³³ *About Angie's List*, ANGIE'S LIST, <https://www.angieslist.com/aboutus.htm> (last visited Nov. 7, 2018).

³⁴ *About us*, BOOKSY INC., <https://booksy.com/en-us/about.html> (last visited Nov. 7, 2018).

³⁵ See David Shadpour, *The Gig Economy: Pioneering the Future*, FORBES (Jan. 19, 2018), <https://www.forbes.com/sites/forbesagencycouncil/2018/01/19/the-gig-economy-pioneering-the-future/#7d70d6af634a>.

³⁶ *Uber – Earn Money by Driving or Get a Ride Now*, UBER TECHNOLOGIES INC., <https://www.uber.com/> (last visited Dec. 7, 2018).

³⁷ *Rent Out Your House, Apartment, or Room on Airbnb*, AIRBNB, INC., https://www.airbnb.com/host/homes?from_nav=1 (last visited Dec. 7, 2018).

³⁸ Greg Waldorf, *Side Gigs Are a Thriving Part of the Economy That Economists Probably Aren't Measuring Very Well*, ENTREPRENEUR (Feb. 22, 2018), <https://www.entrepreneur.com/article/308852>.

³⁹ U.S. Telecom Ass'n v. Fed. Comm'n Comm'n, 825 F.3d 674, 689 (D.C. Cir. 2016); Verizon v. Fed. Comm'n Comm'n, 740 F.3d 623, 628 (D.C. Cir. 2014).

a century, by classifying the companies as common carriers.⁴⁰ Common carrier designation came with several responsibilities for the regulated company, including price controls, as well as guaranteed nondiscriminatory service for any willing customer.⁴¹ It's not difficult to see the value behind this application for telephone users—imagine if a phone provider could block a customer's call to a rival provider, for example, in a bid to make it more difficult for the customer to switch providers.

However, for two decades, United States caselaw and regulation distinguished certain internet service providers from common carriers.⁴² The regulatory framework designated phone providers, as well as “backbone” internet providers, as common carriers, on the basis that these companies provided “basic service.”⁴³ On the other hand, it differentiated “last-mile” internet service providers as providing “enhanced services,” and therefore grouped these providers separately.⁴⁴ This is a subtle, but important, distinction. Last-mile providers, companies commonly referred to as internet service providers,⁴⁵ connect endpoint users, such as individual houses, to networks maintained by backbone providers in exchange for subscription payment from the user.⁴⁶ Backbone providers, on the other hand, supply the large-scale, national and international connections that users connect to through last-mile providers.⁴⁷ However, despite the key legal distinction between these two classes

⁴⁰ 47 U.S.C. §153(11) (2012).

⁴¹ STUART MINOR BENJAMIN & JAMES B. SPETA, *TELECOMMUNICATIONS LAW AND POLICY* 12 (4th ed. 2015).

⁴² *Verizon*, 740 F.3d at 630.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.* at 628-29.

⁴⁶ See Fred Campbell, *How the FCC Subverted Net Neutrality's First Principles*, *FORBES* (May 17, 2018),

<https://www.forbes.com/sites/fredcampbell/2018/05/17/how-the-fcc-subverted-net-neutralitys-first-principles/#10e2eb55716c>; Tim Fernholz & David Yanofsky, *How the Internet Works, and Why it's Impossible to Know What Makes Your Netflix Slow*, *QUARTZ* (Mar. 21, 2014), <https://qz.com/187034/how-the-internet-works-and-why-its-impossible-to-know-what-makes-your-netflix-slow/>; *Understanding Last Mile Internet Access*, DATAPATH.IO, <https://datapath.io/resources/blog/understanding-last-mile-internet-access/> (last visited Dec. 8, 2018).

⁴⁷ *Id.* See also Logan Rivenes, *What is an Internet Service Provider (ISP)?* (July 12, 2018), <https://datapath.io/resources/blog/what-is-an-internet-service-provider/> (Discussing network hierarchies in greater depth); Jeff Tyson, *How Internet Infrastructure Works*, <http://web.stanford.edu/class/msande91si/www-spr04/readings/week1/Howstuffworks.htm> (last visited Nov. 8, 2018).

of network infrastructure, last-mile internet service and backbone internet service are often provided by the same companies.⁴⁸

After about a decade, this policy of differentiating between last-mile internet providers and backbone providers began to receive renewed scrutiny. In 2007, Comcast—at the time the largest cable company and second largest internet service provider—was accused of throttling data.⁴⁹ Despite advertising dedicated upload bandwidth speeds, Comcast was delaying or preventing users from uploading data to dedicated peer-to-peer file sharing websites, such as BitTorrent.⁵⁰ Although individuals sometimes used file sharing websites to pirate music or software, users also frequently employed them to disseminate legal content.⁵¹ Indeed, to appreciate the value of legally-used file sharing websites, one only needs to look as far as the widespread use of file sharing today, through platforms such as Dropbox and Google Drive.⁵² Comcast justified its data restriction on the basis of bandwidth management, suggesting that the relatively higher bandwidth usage by customers who used peer-to-peer file sharing websites impaired Comcasts ability to supply internet access to customers who did not use those websites.⁵³

In response, the FCC issued an order to the company, finding that Comcast violated federal policy and holding that “consumers are entitled to access the lawful Internet content of their choice . . . [and] to run applications and use services of their choice.”⁵⁴ Although Comcast had abandoned their blocking procedure by that point, the order required Comcast to disclose future bandwidth management procedures.⁵⁵ Comcast challenged this order, and the D.C. Circuit Court ruled that the FCC had no statutory authority to enforce this type of regulation on internet service providers.⁵⁶

⁴⁸ *Verizon*, 740 F.3d at 631.

⁴⁹ Peter Svensson, *Comcast Blocks Some Internet Traffic*, WASH. POST (Oct. 19, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/19/AR2007101900842.html?noredirect=on>.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² See Barb Darrow, *Google Drive Claims One Million Paying Customers, Er, Organizations*, FORTUNE (Sept. 21, 2015), <http://fortune.com/2015/09/21/google-drive-1m-paid-users/>.

⁵³ Peter Svensson, *Comcast Blocks Some Internet Traffic*, WASH. POST (Oct 19, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/19/AR2007101900842.html?noredirect=on>.

⁵⁴ *Comcast v. Fed. Comm’n Comm’n.*, 600 F.3d 642, 644 (D.C. Cir. 2010).

⁵⁵ *Id.* at 645

⁵⁶ *Id.* at 661.

After their order to Comcast was struck down, the FCC issued new general rules for internet service providers, but neglected to reclassify last-mile internet service providers as common carriers.⁵⁷ Instead, the new rules regulated both basic service providers and enhanced service providers under the same framework, regardless of classification.⁵⁸ Once again, these regulations were challenged by a major telecommunications company—Verizon. Once again, the D.C. Circuit Court Struck down the FCC's attempt to regulate last-mile providers.⁵⁹ In a similar ruling to the previous case, the Court ruled that the FCC had no statutory standing to enforce content neutral regulations for enhanced service providers.⁶⁰

However, the D.C. Circuit noted that the FCC had provided adequate support for its policy conclusion that broadband providers were heavily incentivized to take payments to prioritize service, and that competition would likely not root out the problem.⁶¹ The D.C. Circuit concluded that the FCC had rationally supported its policy determination, but did not enact that policy under its statutory authority.⁶² The message was clear. If the FCC wanted to apply net neutrality regulation to these last-mile providers, they would have to reclassify last-mile providers as common carriers.

The FCC turned to public comment to determine popular sentiment in determining its next step. After receiving over one million comments, at the time the most ever for proposed rulemaking,⁶³ the FCC issued its new regulations, reclassifying all internet service providers as common carriers in order to enforce net neutrality.⁶⁴ These rules applied to both fixed broadband and wireless internet

⁵⁷ FED. COMM'C'N. COMM'N, FCC 10-201, IN RE PRESERVING THE OPEN INTERNET BROADBAND INDUSTRY PRACTICES (Dec. 23, 2010).

⁵⁸ *Id.*

⁵⁹ *Verizon*, 740 F.3d at 628.

⁶⁰ *Id.*

⁶¹ *Id.* at 644-47.

⁶² *Id.* at 628.

⁶³ Elise Hu, *1 Million Net Neutrality Comments Filed, But Will They Matter?*, NAT'L PUB. RADIO (July 21, 2014), <https://www.npr.org/sections/alltechconsidered/2014/07/21/332678802/one-million-net-neutrality-comments-filed-but-will-they-matter>.

⁶⁴ Rebecca R. Ruiz and Steve Lohr, *F.C.C. Approves Net Neutrality Rules, Classifying Broadband Internet Service as a Utility*, N.Y. TIMES (Feb. 26, 2015), <https://www.nytimes.com/2015/02/27/technology/net-neutrality-fcc-vote-internet-utility.html>.

providers.⁶⁵ The rules enforcing net neutrality were grouped into three broad categories.⁶⁶

First, no blocking. The regulations prohibited broadband providers from blocking access to legal content, applications, services, or non-harmful devices.⁶⁷

Secondly, no throttling. The new rules forbid internet service providers from impairing or degrading lawful internet traffic on the basis of content, applications, services, or non-harmful devices.⁶⁸

Thirdly, no paid prioritization.⁶⁹ The regulations prevented internet service providers from favoring some lawful traffic over other lawful traffic in exchange for consideration.⁷⁰ This final rule addressed the so-called “internet fast lanes” by which either end users would have to pay more to get higher speeds on certain types of websites (like video streaming) or content providers could pay a premium to have their websites load faster than the competition. This did not prevent internet service providers from offering different base bandwidth speeds based on different rates paid by customers, only from applying different speeds or rates to the same customer based on the content accessed.⁷¹

Predictably, these new FCC regulations were again challenged in the D.C. Circuit Court, this time by “broadband providers and their associations.”⁷² This time, the D.C. Circuit upheld the FCC’s new net neutrality regulations, finding that the new regulations fell within the FCC’s statutory authority to designate and regulate common carriers, thereby resolving the issues with the current legislation.⁷³ By striking down the FCC’s previous regulations based on procedural grounds, rather than the FCC’s policy conclusions,⁷⁴ and upholding the new regulations,⁷⁵ the D.C. Circuit here suggests a deference to the policy of the FCC, so long as the policy is promulgated under the FCC’s

⁶⁵ Joel Rose, *What Net Neutrality Rules Could Mean For Your Wireless Carrier*, NPR (Feb. 25, 2015), <https://www.npr.org/sections/alltechconsidered/2015/02/25/388948293/what-net-neutrality-rules-could-mean-for-your-wireless-carrier>.

⁶⁶ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,738-39 (Apr. 13, 2015).

⁶⁷ *Id.* at 19,739.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.* at 19,754.

⁷² *U.S. Telecom Ass’n v. Fed. Comm’n Comm’n*, 825 F.3d 674, 689 (D.C. Cir. 2016).

⁷³ *Id.* at 733-34.

⁷⁴ *Verizon*, 740 F.3d at 644-47.

⁷⁵ *U.S. Telecom Ass’n*, 825 F.3d at 689.

statutory authority and with adequate factfinding, consistent with the *Chevron* doctrine.⁷⁶

However, in 2017, the FCC announced plans to repeal the previous reclassification.⁷⁷ Despite another period of widespread public comment (this time against the proposed change),⁷⁸ the FCC repealed the rules in December 2017, with the new rules going into effect in June 2018. The new rules have three points. First, the FCC no longer regulates internet service providers, instead, the task reverts to the Federal Trade Commission (“FTC”).⁷⁹ Second, the policy added new transparency requirements about internet service provider’s data policies.⁸⁰ These transparency requirements purport to allow market forces to regulate providers, by subjecting them to the choices of an informed customer base.⁸¹ Third, the new policy removed common carrier classification from internet service providers.⁸²

Despite the widespread public outcry against these changes, the FCC stood by the Restoring Internet Freedom Act,⁸³ putting the new regulations into effect on June 11, 2018.⁸⁴ The FCC pointed out, after all, that the net neutrality rollback is simply a return to regulations that had been in place for twenty years.⁸⁵ On its face, this argument is accurate.⁸⁶ Additionally, the FCC argues that the Restoring Internet Freedom Act will lead to more private sector investment in broadband

⁷⁶ See *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984) (describing the framework for granting deference to a government agency’s construction of a statute it administers when Congress has not defined the term).

⁷⁷ *Restoring Internet Freedom*, FED. COMM’N. COMM’N., <https://www.fcc.gov/restoring-internet-freedom> (last visited March 19, 2019).

⁷⁸ Levi Sumagaysay, *FCC Now Says There Were No Cyber Attacks During Net Neutrality Comment Period*, CHI. TRIB. (Aug. 7, 2018), <http://www.chicagotribune.com/business/ct-biz-fcc-ddos-net-neutrality-comment-period-20180807-story.html>.

⁷⁹ *Restoring Internet Freedom*, FED. COMM’N. COMM’N., <https://www.fcc.gov/restoring-internet-freedom> (last visited March 19, 2019).

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ *FCC Chairman Responds to Critics of Net Neutrality Rollback, Vows to Stop “Bad Apples”*, CBS NEWS (June 11, 2018), <https://www.cbsnews.com/news/fcc-ajit-pai-net-neutrality-rollback-vows-consumers-will-be-protected/>.

⁸⁴ Keith Collins, *Net Neutrality Has Officially Been Repealed. Here’s How That Could Affect You*, N.Y. TIMES (June 11, 2018), <https://www.nytimes.com/2018/06/11/technology/net-neutrality-repeal.html>.

⁸⁵ *Restoring Internet Freedom*, 83 Fed. Reg. 7852, 7872 (Feb. 22, 2018) (to be codified at 47 C.F.R. pts. 1, 8, and 20).

⁸⁶ See *id.*

in the United States, thereby benefitting consumers.⁸⁷ Why then, is a rollback in net neutrality regulations bad for small businesses? The answer lies in the vulnerabilities of the pre-2015 regulations, the changes in the application and commercialization of the internet that exacerbate these vulnerabilities, and the failure of the Restoring Internet Freedom Act to account for those vulnerabilities.

IV. NATURAL MONOPOLIES AND COMMON CARRIERS

Both the pre-2015 and the post-2017 net neutrality regulations are inadequate regulatory methods of dealing with a natural monopoly. Differentiating last-mile providers from common carriers is a misapplication of commonly accepted methods of limiting the risks of inefficiency presented by natural monopolies, which are the reason common carrier classification exists in the first place.⁸⁸ A natural monopoly is one in which service can be most efficiently provided by one firm.⁸⁹ For example, barriers to entry such as “prohibitively large investments” disincentivize competing firms from entering the market, since the resulting competition would drive the demand price down below the point of profitability relative to the initial investment to enter the market.⁹⁰ When markets are large enough that the natural monopoly results in significant excess profits or misallocated resources, the market should be regulated.⁹¹ In network markets, such as electricity, upstream competition may still result in downstream natural monopolies, as there is still only one last-mile, or “transmission” provider.⁹² Even when there are multiple power plants generating electricity, it would still be most efficient for one firm to

⁸⁷ *Oversight Hearing*, *supra* note 16, at 3 (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”).

⁸⁸ Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548 (1969). See Tyler Elliot Bettilyon, *Network Neutrality: A History of Common Carrier Laws 1884-2018*, MEDIUM (Dec 12, 2017), <https://medium.com/@TebbaVonMathenstien/network-neutrality-a-history-of-common-carrier-laws-1884-2018-2b592f22ed2e>.

⁸⁹ *Id.*

⁹⁰ SANFORD V. BERG & JOHN TSCHIRHART, NATURAL MONOPOLY REGULATION, PRINCIPLES AND PRACTICE 28 (1988).

⁹¹ *Id.* (noting that some natural monopolies, such as a small town with a single supermarket, do not result in significant inefficiency to necessitate regulation).

⁹² See Joseph P. Tomain, *The Persistence of Natural Monopoly*, 16 NAT. RESOURCES & ENV'T. 242 (2002), for a discussion of the “transmission problem” as it relates to the natural monopoly in the California energy market.

connect customers' houses to the power grid—after all, a competitor would have to pay to build infrastructure to the houses, but could not charge a higher price, and would still buy the electricity from the upstream provider at the same market price.⁹³

It is easy to see how the internet service industry is analogous to other network economies, such as electricity. Despite the multitude of internet service providers nationally, many Americans only have access to one last-mile high speed internet provider to connect their household to the national backbone network.⁹⁴ Up to forty-three percent of Americans face this dilemma.⁹⁵ For the majority of Americans, this leaves them with no other options besides agreeing to the terms offered by the last-mile provider or going without internet.

Additionally, the “network effect” common in network economies makes the negative effects of a monopoly even more pronounced. In these types of economies, the relative value of a service increases alongside the number of other users that the service allows a user to connect to.⁹⁶ As the service becomes more valuable, competitors face an ever-increasing barrier to entry.⁹⁷ This can create a positive feedback loop that further entrenches monopoly power.⁹⁸ Since internet service providers control the connections between users, they are able to wield the power of the network effect.

In the case of natural monopolies, government regulation is used to prevent one firm from harmfully wielding monopoly power over a specific regional industry.⁹⁹ This can take several forms, such as

⁹³ *Id.*

⁹⁴ The FCC establishes a benchmark for broadband, as “advanced telecommunications capability,” consisting of fixed broadband internet with speeds of at least 25 megabits per second (“Mbps”) download speed, and 3 Mbps upload speed. See FED. COMM. COMM’N, 33 FCC RCD 1660 (2), *IN RE INQUIRY CONCERNING DEPLOYMENT OF ADVANCED TELECOMMUNICATIONS CAPABILITY TO ALL AMERICANS IN A REASONABLE AND TIMELY FASHION* 5 (2018) [hereinafter *DEPLOYMENT INQUIRY*], for a proposal that the FCC maintain the current benchmark for broadband internet. However, according to the FCC, only 57% of developed census blocks have access to more than one internet provider with speeds meeting that benchmark. INDUSTRY ANALYSIS AND TECHNOLOGY DIVISION, WIRELINE COMPETITION BUREAU, FED. COMM. COMM’N, *INTERNET ACCESS SERVICES: STATUS AS OF DECEMBER 31, 2016* 6 (2018) [hereinafter *INTERNET ACCESS STATUS*].

⁹⁵ *INTERNET ACCESS STATUS*, *supra* note 94, at 6.

⁹⁶ BENJAMIN, *supra* note 41, at 8-9.

⁹⁷ *Id.*

⁹⁸ *Id.* at 9.

⁹⁹ Posner, *supra* note 88, at 548.

guaranteeing rates for utilities such as water and electricity¹⁰⁰, or for enforcing common carrier regulations on industries such as telephone networks and railway companies.¹⁰¹ For more than one hundred years telecommunications companies and public transportation agencies have been regarded as common carriers for the purpose of regulating natural monopolies.¹⁰²

The FCC argues that market competition will pressure last-mile internet service providers to keep the internet open in the absence of regulation, venturing from this established regulatory framework for natural monopolies emerging from network economies.¹⁰³ However, the FCC has not established how the Restoring Internet Freedom Act will provide for market forces sufficient to overcome costs of entry. As discussed above, a natural monopoly exists when substantial costs of entry discourage firms from providing competing service.¹⁰⁴ This is plainly the case for internet service providers, where costs to connect new customers' homes to the providers' existing networks may easily cost thousands of dollars.¹⁰⁵ This represents a "prohibitively large investment" that would disincentivize potential internet service provider from competing with existing providers.¹⁰⁶ With the resulting lack of choice for consumers, they are unable to "vote with their wallets" and purchase internet service from providers with more consumer-friendly policies.

¹⁰⁰ See generally, JAMES C. BONBRIGHT, *PRINCIPLES OF PUBLIC UTILITY RATES* (1961) (discussing more comprehensively the justifications for and theories of ratemaking).

¹⁰¹ See Tyler Elliot Bettilyon, *Network Neutrality: A History of Common Carrier Laws 1884-2018*, MEDIUM (Dec 12, 2017), <https://medium.com/@TebbaVonMathenstien/network-neutrality-a-history-of-common-carrier-laws-1884-2018-2b592f22ed2e>.

¹⁰² BENJAMIN, *supra* note 41, at 190 ("the Mann-Elkins Act of 1910 deemed telephone companies to be common carriers). See also 47 USCA §153(11) (2012), for the Communications Act of 1934.

¹⁰³ FED. COMM. COMM'N., WC No. 17-108 FCC FACT SHEET RESTORING INTERNET FREEDOM (2018), <https://www.fcc.gov/document/myth-vs-fact-chairman-pais-restoring-internet-freedom-order>.

¹⁰⁴ BERG, *supra* note 90, at 28.

¹⁰⁵ Rob Pegoraro, *New Home, No Broadband? Prepare to Negotiate*, USA TODAY (Mar. 29, 2015), <https://www.usatoday.com/story/tech/columnist/2015/03/29/home-outside-broadband-coverage/70626156/>.

¹⁰⁶ BERG, *supra* note 90, at 28.

V. NET NEUTRALITY AND SMALL BUSINESSES

Although the regulatory rollback of net neutrality is ominous for any business outside of internet service providers—several tech giants have lobbied against the Restoring Internet Freedom Act¹⁰⁷—it leaves small businesses especially vulnerable. As discussed above, small businesses increasingly rely on the internet to market, sell, and conduct other aspects of their business.¹⁰⁸ Due to these recent changes in how small businesses operate, internet has become a necessary aspect of running a business, not an item of luxury or convenience.

The Restoring Internet Freedom Act could lead to higher costs for internet service in general, and specifically for small businesses. As discussed above, the purpose of common carrier legislation is to prevent a company from taking unfair advantage of its natural monopoly.¹⁰⁹ Many last-mile providers have a natural monopoly,¹¹⁰ practically preventing any new competitors from entering the market.¹¹¹ Where natural monopolies lead to a lack of competition to ensure efficiency amongst providers, market failure often results.¹¹² Market failure is the inability of market forces to ensure efficient resource allocation, which can lead to lower production and higher prices, as there is no competitive drive between providers.¹¹³ By removing common carrier classification from last-mile internet providers, the FCC is allowing a state of market failure to exist for a huge portion of the economy.¹¹⁴ Without sufficient competition, free market forces will be unable to ensure efficient resource allocation amongst internet service providers. This could result in increased broadband rates, and less optimal internet speed for users across the board.

¹⁰⁷ Mallory Locklear, *Netflix, Google and Others Voice Frustration with Net Neutrality Vote*, ENGADGET (Dec. 14, 2017), <https://www.engadget.com/2017/12/14/netflix-google-voice-frustration-net-neutrality-fcc/>; Jeff John Roberts, *Google and Facebook Give Net Neutrality a Boost*, FORTUNE, July 7, 2017, <http://fortune.com/2017/07/07/net-neutrality-google/>.

¹⁰⁸ See notes 18-38 and accompanying text.

¹⁰⁹ See notes 99-102 and accompanying text. See also Posner, *supra* note 88, at 548.

¹¹⁰ See notes 94-95 and accompanying text.

¹¹¹ See *supra* 89 and accompanying text.

¹¹² BENJAMIN, *supra* note 41, at 6-10 (4th ed. 2015).

¹¹³ *Id.* at 6.

¹¹⁴ See INTERNET ACCESS STATUS, *supra* note 94 at 6 for statistics showing the lack of choice amongst broadband providers for 44% of Americans.

Additionally, the potential for internet “fast lane” service options could create new costs for small businesses.¹¹⁵ Imagine if a business had to pay a premium for phone service when it was used to call customers, or if certain businesses received preferred electricity rates that their competitors did not.¹¹⁶ For service providers that are classified as common carriers, such as telephone companies, the law forbids discrimination based on undue preference to any particular person, class of persons, or locality.¹¹⁷ However, the Restoring Internet Freedom Act removes common carrier designation from last-mile internet service providers, reclassifying them as an “information service,”¹¹⁸ making these pricing structures legal for those companies. If internet service providers begin offering fast lane packages to companies, then those companies that do not pay will be at a competitive disadvantage, creating a “pay-to-play” scenario where a company must pony up if they want to compete.¹¹⁹ Just as bribes create a barrier to entry for new firms in third world countries,¹²⁰ an additional fast lane fee would discourage development of independent competitors and small businesses.

On the other hand, supporters of the Restoring Internet Freedom Act claim that the new rules will lead to increased investment by internet service providers, resulting in better, less expensive, internet service, and lower internet costs across the country.¹²¹ However, the purported investment benefits of the Restoring Internet Freedom Act

¹¹⁵ Tiffany Hsu, *F.C.C. Plan to Roll Back Net Neutrality Worries Small Businesses*, N.Y. TIMES (Nov. 21, 2017), <https://www.nytimes.com/2017/11/22/business/net-neutrality-small-businesses.html>.

¹¹⁶ See Chuck Schumer, *Op-ed: The Internet Belongs to the People, Not Powerful Corporate Interests*, ARSTECHNICA (March 3, 2017), <https://arstechnica.com/tech-policy/2017/03/op-ed-the-internet-belongs-to-the-people-not-powerful-corporate-interests/>.

¹¹⁷ 47 U.S.C. §202(a) (2012).

¹¹⁸ Restoring Internet Freedom, 83 Fed. Reg. 7852, (Feb. 22, 2018) (to be codified at 47 C.F.R. pts. 1, 8, and 20).

¹¹⁹ See BENJAMIN, *supra* note 41, at 614.

¹²⁰ See Nauro Campos, Eugenio Proto & Saul Estrin, *Corruption as a Barrier to Entry*, VOX CEPR POLICY PORTAL (Nov. 5, 2010), <https://voxeu.org/article/corruption-barrier-entry>, for a discussion on how bribes to deal with institutional corruption serve as a barrier to entry for new firms in Brazil.

¹²¹ See *Oversight Hearing*, *supra* note 16, at 3 (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”); Roslyn Layton, *A Modern Framework for Internet Freedom*, U.S. NEWS & WORLD REPORT (May 11, 2017), <https://www.usnews.com/opinion/economic-intelligence/articles/2017-05-11/how-congress-and-fcc-chairman-ajit-pai-can-restore-internet-freedom>.

are dubious.¹²² In fact, evidence that the 2015 Open Internet Order impaired investment in the first place is lacking.¹²³ Although overall U.S. broadband provider capital expenditure fell about four percent in the two years following the 2015 Open Internet Order,¹²⁴ this was largely driven by Sprint and AT&T finishing the costly buildout of their LTE networks.¹²⁵ Across the United States investment from all other providers was up nine percent during this time.¹²⁶ Additionally, in 2017, before the Restoring Internet Freedom Act went into effect, overall capital expenditures rose two percent over 2016.¹²⁷ Meanwhile, three major wireless and fixed broadband providers, Sprint, Verizon, and AT&T, have lowered their capital expenditure projections for 2018,¹²⁸ despite the Restoring Internet Freedom Act going into effect in June 2018.

Although market failure and fast-lane options could lead to higher internet costs to businesses of all sizes, any proportional increase in costs will be disproportionately detrimental to small businesses, since small businesses are especially vulnerable to changes in their profit margins. A profit margin is the ratio of a company's net income to the company's total revenue, essentially measuring a company's profitability.¹²⁹ Net income, in turn, is the difference between a company's overall income, and the costs associated with generating that income.¹³⁰ Generally, the higher a business's overall sales volume is, the lower its profit margins need to be in order to maintain support

¹²² *Id.*

¹²³ See Ro Khanna, *California Is Trying To Pass A Net Neutrality Bill—And Broadband Providers Are Trying To Gut It*, L.A. TIMES (Aug. 13, 2018), <https://www.latimes.com/opinion/op-ed/la-oe-khanna-net-neutrality-20180813-story.html>.

¹²⁴ PATRICK BROGAN, USTELECOM, U.S. BROADBAND INVESTMENT REBOUNDED IN 2017 (Oct. 18, 2018), <https://www.ustelecom.org/broadband-industry-stats/investment/historical-broadband-provider-capex>.

¹²⁵ Troy Wolverton, *A New Report Says that Broadband Investment Actually Rose After Net Neutrality Regulation*, BUS. INSIDER, May 15, 2017, <https://www.businessinsider.com/broadband-investment-up-after-new-net-neutrality-rules-2017-5>.

¹²⁶ *Id.*

¹²⁷ BROGAN, *supra* note 124.

¹²⁸ Mike Dano, *Despite Sky-High Expectations, Wireless Capex Shows Signs of Sluggishness*, FIERCEWIRELESS (Nov. 8, 2017), <https://www.fiercewireless.com/wireless/despite-sky-high-expectations-wireless-capex-shows-signs-sluggishness>.

¹²⁹ Kenneth Hamlett, *The Difference Between Profit and Profit Margin*, HOUSTON CHRONICLE (Feb. 12, 2019), <https://smallbusiness.chron.com/difference-between-profit-profit-margin-1595.html>.

¹³⁰ CHRISTIAN OEHLER, ACCOUNTING FOR LAWYERS 76-79 (1953).

for business operations.¹³¹ Larger companies have a larger overall sales volume, and are able to survive on smaller profit margins.¹³² On the other hand, smaller companies, with smaller overall sales volume, need to maintain a higher profit margin in order to continue operating.¹³³ Therefore, increased costs across the entire industry will do the most harm to the smallest businesses, whose total revenue is too small to compensate for thinner profit margins.

Additionally, the rollback of net neutrality regulations gives an advantage to product and application creators who are financially affiliated with internet service providers. Oftentimes, internet service providers develop their own alternatives to popular products and applications, to get a piece of the proverbial pie. For example, AT&T owns HBO, while it shares ownership in Hulu with Comcast,¹³⁴ and is attempting to purchase Time Warner—although thus far the deal has not been approved, interestingly, by President Trump’s administration.¹³⁵ Many large internet service providers have a financial interest in products and services that directly compete with the companies that providers’ customers use, and with companies that may themselves be customers of the providers. In order to favor their own applications, products and services, internet service providers may block and throttle access to competing applications, products, and services.¹³⁶ Since last-mile-providers are no longer considered common carriers,¹³⁷ the legal prohibitions against discriminating based on content no longer apply.¹³⁸

¹³¹ See John Mariotti, *Selling More for Less or Selling Less for More?*, FORBES (Jan. 21, 2011), <https://www.forbes.com/sites/prospornow/2011/01/21/selling-more-for-less-or-selling-less-for-more/#1ca176855444>.

¹³² *High Volume Low Margin or High Margin Low Volume?*, GENEVA BUS. SCH., <https://gbsge.com/high-volume-low-margin-or-high-margin-low-volume/>, (last visited Dec. 8, 2018).

¹³³ *Id.*

¹³⁴ Jeff Dunn, *Trump’s New FCC Boss Could Make it Easier for Internet Providers to Play Favorites*, BUS. INSIDER (Jan. 24, 2017), <https://www.businessinsider.com/internet-content-net-neutrality-fcc-ajit-pai-trump-chart-2017-1>.

¹³⁵ Nathan McAlone, *Trump Still Doesn’t Think the \$85 Billion AT&T-Time Warner Merger Should Be Approved*, BUS. INSIDER (Jan. 5, 2017), <https://www.businessinsider.com/trump-is-against-the-att-time-warner-deal-2017-1>.

¹³⁶ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,748 (Apr. 13, 2015).

¹³⁷ Restoring Internet Freedom, 83 Fed. Reg. 7852, (Feb. 22, 2018) (to be codified at 47 C.F.R. pts. 1, 8, and 20).

¹³⁸ See 47 U.S.C. §202(a) (2012).

The threats of blocking and throttling are not hypothetical. Companies engaged in the practice before the FCC enacted specific requirements against doing so. In 2007, Comcast was caught blocking BitTorrent.¹³⁹ AT&T, another leading provider of both mobile and household internet service, has blocked Skype¹⁴⁰ and FaceTime.¹⁴¹ In fact, AT&T only reversed its policy of blocking FaceTime after a formal complaint was filed with the FCC.¹⁴² Verizon, the plaintiff of past litigation against the FCC regarding net neutrality regulation, has blocked Google Wallet in favor of its own proprietary competing app.¹⁴³ In both of these cases, the providers were blocking access to apps developed by massive, powerful, and well-known corporations—Google and Apple.¹⁴⁴ It isn't hard to imagine how much more difficult the situation would be when the blocked company is a relatively smaller company. Since the regulatory rollback in 2017, internet service providers have returned to throttling content. For example, using a mobile app, researchers at Northeastern University and the University of Massachusetts Amherst have uncovered evidence of throttling by wireless providers.¹⁴⁵

In fact, telecommunications companies have been blocking access to smaller independent competitors for nearly as long as the industry has existed. In the early 1900s, the earliest days of telephone networks, different companies ran their own local networks, and generally did not connect to the local networks of competitors.¹⁴⁶ The Bell

¹³⁹ Peter Svensson, *Comcast Blocks Some Internet Traffic*, WASH. POST (Oct. 19, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/19/AR2007101900842.html?noredirect=on>.

¹⁴⁰ Amy Schatz, *In Reversal, AT&T Will Allow Skype, Similar Services on iPhone Network*, WALL STREET J., Oct. 7, 2009, <https://www.wsj.com/articles/SB125486091615268647>.

¹⁴¹ Cecilia Kang, *AT&T lifts FaceTime restrictions on Apple iPhones*, WASH. POST (Nov. 8, 2012), https://www.washingtonpost.com/blogs/post-tech/post/atandt-lifts-facetime-restrictions-on-apple-iphones/2012/11/08/cbec36de-29de-11e2-b4e0-346287b7e56c_blog.html?utm_term=.f2d1685d3dee.

¹⁴² *Id.*

¹⁴³ David Goldman, *Verizon Blocks Google Wallet*, CNN MONEY (Dec. 6, 2011), https://money.cnn.com/2011/12/06/technology/verizon_blocks_google_wallet/index.htm.

¹⁴⁴ *Id.*

¹⁴⁵ Aria Bracci & Lia Petronio, *New Research Shows that, Post Net Neutrality, Internet Providers are Slowing Down Your Streaming*, NE. U. (Sep. 10, 2018), <https://news.northeastern.edu/2018/09/10/new-research-shows-your-internet-provider-is-in-control/>; Harper Neidig, *Sprint Has Been Throttling Skype, Researchers Say*, THE HILL (Nov. 9, 2018), <https://thehill.com/policy/technology/415950-researchers-say-sprint-has-been-throttling-skype>.

¹⁴⁶ BENJAMIN, *supra* note 41, at 189.

Telephone Company (named for Alexander Graham Bell, and itself a successor to modern-day AT&T) controlled as much of the telephone market as did all its competitors combined, and maintained nearly exclusive control of most major urban areas as well as the long-distance networks connecting them.¹⁴⁷ Although many customers had at least a theoretical choice between at least two companies, the inability of local carriers to connect with Bell's customers gave Bell an advantage to maintain its market share.¹⁴⁸ Consumer demand lead Bell to expand into more rural areas, and for some competitors to expand into Bell's urban markets,¹⁴⁹ but did not lead to the companies voluntarily interconnecting their networks.¹⁵⁰ It required a negotiated settlement between Bell and the government to compel Bell to connect local competitors to its long-distance backbone network.¹⁵¹

It seems disingenuous, therefore, for the FCC to claim that market forces will prevent broadband companies from blocking or throttling competitors.¹⁵² Stretching back to the earliest days of telecommunications, the same major companies have repeatedly blocked access to those competitors in the absence of government regulation, despite strong consumer demand to the alternative. Consumer demand for connection did not cause telephone companies to interconnect, it simply caused them to try and expand their own exclusive services.¹⁵³ Furthermore, when there are only one or two rival firms providing service, the incentive for and risk of anticompetitive discrimination increases.¹⁵⁴ Why, then, would consumer demand for internet access to content, products, and services compel internet service providers to guarantee access, and not simply develop their own competing content, products, and services?

Similarly, blocking and throttling could provide an unfair advantage to large companies in general, not only those companies affiliated with internet service providers. Theoretically, any company with sufficient financial resources could ensure that they do not suffer blocking or throttling of their products or services.¹⁵⁵ The

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 190.

¹⁵¹ *Id.* at 191.

¹⁵² See *Restoring Internet Freedom*, Fed. Comm'n. Comm'n., <https://www.fcc.gov/restoring-internet-freedom> (last visited March 19, 2019).

¹⁵³ See *supra* notes 146-51 and accompanying text.

¹⁵⁴ BENJAMIN, *supra* note 41, at 615.

¹⁵⁵ See BENJAMIN, *supra* note 41, at 614.

promulgation of internet “fast lanes”, as predicted and banned by the 2015 Open Internet Act, would allow companies to pay for their websites to load faster.¹⁵⁶ If a company does not pay the fee, their website may load more slowly than the competitors who were able to pay.¹⁵⁷ The market forces cited by the Restoring Internet Freedom Act¹⁵⁸ would exacerbate fast lanes, rather than solve them, since larger firms could simply outbid smaller firms to take advantage of fast lanes.¹⁵⁹

Even a small amount of throttling, blocking, or fast lane service could make a huge difference for customers. Just like companies today that pay to advertise their own products or services at the top of an internet search, selective data throttling could allow companies to pay for a preference in data allotment. Studies have shown that consumers are likely to move on from a webpage if it doesn’t load right away.¹⁶⁰ As baseline speed increases (which it consistently has over time), this effect increases.¹⁶¹ Therefore, a small deviation in load time could have a large effect in the aggregate.

A company could therefore damage the rate of engagement with a competitor’s website, by paying for their own website to have a faster load time. This could force startups to “pay-to-play” in order to have service to their own websites be comparable to well-established competitors¹⁶² It is not difficult to imagine how this could disproportionately affect small businesses. Just like most small businesses don’t have the capital to advertise at the top of search engines, they will probably not have the funds to pay for a fast lane to their website. As discussed above, the small volume of small businesses leaves them especially vulnerable to changes in their profit margins.¹⁶³ This creates a negative feedback loop: small financial

¹⁵⁶ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,740 (Apr. 13, 2015).

¹⁵⁷ *Id.*; Tali Arbel, *After Net Neutrality, Brace for Internet ‘Fast Lanes’*, USA TODAY (Dec. 20, 2017),

<https://www.usatoday.com/story/tech/news/2017/12/20/after-net-neutrality-brace-internet-fast-lanes/970712001/>.

¹⁵⁸ *See Restoring Internet Freedom*, Fed. Comm’n. Comm’n.,

<https://www.fcc.gov/restoring-internet-freedom> (last visited March 19, 2019).

¹⁵⁹ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,748 (Apr. 13, 2015).

¹⁶⁰ Hsu, *supra* note 115.

¹⁶¹ DOUBLECLICK, THE NEED FOR MOBILE SPEED (2017)

https://docs.google.com/viewerng/viewer?url=https://storage.googleapis.com/doubleclick-prod/documents/The_Need_for_Mobile_Speed_-_FINAL.pdf.

¹⁶² BENJAMIN, *supra* note 41, at 614.

¹⁶³ *See supra* notes 129-33 and accompanying text.

resources make it difficult for small businesses to pay for fast lanes, the lack of fast lanes would lead to decreased profits, which would lead to a smaller profit margin, thus further damaging the financial strength of small businesses.

Overall, the internet is rapidly changing how companies do business. The internet is quickly becoming the dominant force in marketing,¹⁶⁴ retail,¹⁶⁵ and customer outreach,¹⁶⁶ in a variety of industries. Any policy that makes it more difficult for small businesses fully utilize the internet will have a negative effect in the aggregate.

VI. THE IMMEDIATE FUTURE OF NET NEUTRALITY

Although net neutrality was previously a technical debate confined to judicial and agency decision-makers, it now seems destined to become a hard-fought political issue. In May, the Senate voted to overturn the FCC's 2017 Restoring Internet Freedom Act.¹⁶⁷ Senate Democrats were joined by three Republican colleagues, for a 52-47 vote in favor of reversing the decision.¹⁶⁸ However, the resolution was never voted on in the Republican-controlled House of Representatives. Although House Democrats attempted to force a vote with a discharge petition,¹⁶⁹ the petition did not receive the requisite signatures.¹⁷⁰ Interestingly, during the recent 2018 elections, both houses of Congress experienced significant changes in their composition, with Democrats gaining control in the House and Republicans expanding their majority in the Senate.¹⁷¹ It will be interesting to see what, if any, votes regarding net neutrality arise in the next year. Senate Democrats probably no longer have the power to bring a vote, but House Democrats now have a majority.

¹⁶⁴ See Meltzer, *supra* note 7.

¹⁶⁵ See Dennis, *supra* note 18.

¹⁶⁶ See *supra* notes 32-34 and accompanying text.

¹⁶⁷ Cecilia Kang, *Senate Democrats Win Vote on Net Neutrality, a Centerpiece of 2018 Strategy*, N.Y. TIMES, May 16, 2018, <https://www.nytimes.com/2018/05/16/technology/net-neutrality-senate.html>.

¹⁶⁸ *Id.*

¹⁶⁹ Makena Kelly, *Congress is Less than 50 Votes from Passing a Motion to Save Net Neutrality*, THE VERGE, Jun. 8, 2018, <https://www.theverge.com/2018/6/8/17442308/net-neutrality-cra-congress-title-ii-fcc-ajit-pai>.

¹⁷⁰ See Discharge Petition at <http://clerk.house.gov/115/lrc/pd/petitions/DisPet0011.xml>.

¹⁷¹ Bret Stephens, *The Midterm Results Are a Warning to the Democrats*, N.Y. TIMES, Nov. 8, 2018, <https://www.nytimes.com/2018/11/08/opinion/midterm-results-2020-democrats.html>.

It is unlikely that any change in net neutrality regulation will result from the judicial branch. Although the courts have heard decisions regarding net neutrality in the past,¹⁷² these decisions have not been based on policy determinations, but rather on the procedural framework the FCC used to enact these policy determinations.¹⁷³ Since Congress gave the FCC the authority to define “common carriers” in the field of telecommunications, the D.C. Circuit has applied Chevron’s deferential standard of review to the interpretation and application of the term “common carrier”.¹⁷⁴ Therefore, any suit against the FCC based on the merits of the new net neutrality rules will likely fail, as the Court will continue to defer to the FCC’s construction of “common carrier.”

However, the Restoring Internet Freedom Act may face challenges due to deficiencies in the rulemaking procedure that led to its enactment. For over a year there have been allegations of millions of faked comments during the Restoring Internet Freedom Act’s notice and comment period.¹⁷⁵ Recently, the FCC has acknowledged the issue,¹⁷⁶ and the Federal Bureau of Investigation has begun investigating the fake comments.¹⁷⁷ Under *Chevron* deference, it is not clear how the Court would treat rules adopted through a deficient notice and comment rulemaking procedure.¹⁷⁸

Additionally, the Supreme Court has declined to hear a case regarding net neutrality.¹⁷⁹ A suit brought by several internet service

¹⁷² See generally *U.S. Telecom Ass’n v. Fed. Comm’n Comm’n*, 825 F.3d 674 (D.C. Cir. 2016); *Verizon v. F.C.C.*, 740 F.3d 623, 628 (D.C. Cir. 2014); *Comcast v. F.C.C.*, 600 F.3d 642, 644 (D.C. Cir. 2010).

¹⁷³ *Verizon*, 740 F.3d at 644-47.

¹⁷⁴ *Id.* at 650.

¹⁷⁵ John Patrick Pullen, *FCC and Net Neutrality: Check to See if Your Name Was Used in Fake Comments*, *FORTUNE*, Nov. 29, 2017, <http://fortune.com/2017/11/29/fcc-and-net-neutrality-check-to-see-if-your-name-was-used-for-fake-comments/>.

¹⁷⁶ Glenn Fleishman, *FCC Chair Ajit Pai Admits Millions of Russian and Fake Comments Distorted Net Neutrality Repeal*, *FORTUNE*, Dec. 5, 2018, <http://fortune.com/2018/12/05/fcc-fraud-comments-chair-admits/>.

¹⁷⁷ Andrew Liptak, *The FBI is Now Investigating Fake Anti-Net Neutrality Comments*, *THE VERGE*, Dec. 8, 2018, <https://www.theverge.com/2018/12/8/18132096/fbi-investigating-fake-net-neutrality-comments-fcc-new-york-washington-dc-massachusetts>.

¹⁷⁸ In its most recent case defining the extent of *Chevron* deference, *U.S. v. Mead Corp.*, 121 S.Ct. 2164, 2167-68 (2001), the Supreme Court declined to extend deference to rulemaking done outside the scope of delegated Congressional authority. However, *Mead* did not speak to rulemaking that was nominally done in accordance with delegated authority, but in practice was deficient.

¹⁷⁹ Pete Williams & Farnoush Amiri, *U.S. Supreme Court Declines Appeal Against Net Neutrality Laws*, *NBC NEWS*, Nov. 5, 2018,

providers looked to throw out a ruling from the D.C. Circuit Court that held that the FCC acted within its statutory authority to reclassify last-mile providers as common carriers.¹⁸⁰

VII. CONCLUSION AND RECOMMENDATION

FCC Chairman Pai argues that rapidly developing internet technology renders the 2015 Open Internet Order antiquated and ineffective.¹⁸¹ However, despite the similar advances in cellular technology, the “1934 rules” still apply to cellular telephone service, without any substantial legislative or administrative efforts to change that. It seems rather counterintuitive, in fact, to argue that the 2015 Open Internet Order was both outdated¹⁸² and an abandonment of longstanding policy.¹⁸³ In fact, the current rules for net neutrality more closely resemble the rules from the era of floppy disks,¹⁸⁴ while ignoring 130 years of regulatory framework for other natural monopolies.¹⁸⁵

The Restoring Internet Freedom Act’s regulation of last-mile internet service providers is insufficient to protect the interests of small businesses. The 2017 rollback of FCC regulations¹⁸⁶ opens the door for a myriad of threats to the continued operation of small business.

First, the Restoring Internet Freedom Act will result in higher costs for small businesses. By removing common carrier designation¹⁸⁷ from a natural monopoly, the FCC risks the promulgation of ineffective service.¹⁸⁸ Additionally, the increased investment resulting

<https://www.nbcnews.com/tech/tech-news/u-s-supreme-court-declines-net-neutrality-appeal-n931331>.

¹⁸⁰ *Id.*

¹⁸¹ See *Oversight Hearing*, *supra* note 16, at 3 (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”).

¹⁸² *Id.*

¹⁸³ Restoring Internet Freedom, 82 Fed. Reg. 25568, 25570 (2017).

¹⁸⁴ See *Verizon v. F.C.C.*, 740 F.3d 623, 630 (D.C. Cir. 2014) for a discussion on the history of net neutrality regulation.

¹⁸⁵ See 49 Cong. Ch. 104 (1887), for a law to regulate the natural monopolies created by railroad networks.

¹⁸⁶ *Restoring Internet Freedom*, FED. COMM’N. COMM’N. (2017), <https://www.fcc.gov/restoring-internet-freedom>.

¹⁸⁷ *Id.*

¹⁸⁸ William S. Comanor, *Should Natural Monopolies Be Regulated*, 22 STAN. L. REV. 510, 518 (1970).

in “better, faster and cheaper broadband”¹⁸⁹ hypothesized by Chairman Pai has not yet materialized.¹⁹⁰ Fast lane service may burden businesses with an entirely new cost. Higher prices or ineffective service may raise operating costs, and therefore diminish profit margins¹⁹¹ for small businesses. Small businesses are especially susceptible to rising costs, due to their inability to sustain narrow profit margins with their relatively smaller volume.¹⁹² Therefore, inefficiencies and higher prices resulting from the Restoring Internet Freedom Act may jeopardize the profitability of small businesses.

Second, the capability of throttling, blocking, and paid prioritization on the part of last-mile internet service providers threatens to hamper the development of third party applications and services. Last-mile providers will have financial incentives to prioritize traffic to affiliated apps and services.¹⁹³ This could disadvantage non-affiliated businesses.¹⁹⁴

Thirdly, blocking, throttling, and paid prioritization will give a competitive edge to deep-pocketed companies in internet access. With the ability to outbid smaller companies for prioritization,¹⁹⁵ small businesses will have an even greater disadvantage in areas such as e-commerce,¹⁹⁶ and marketing,¹⁹⁷ leading to lower overall revenue.

By shrinking the profit margins of small companies, the Restoring Internet Freedom Act will financially jeopardize them. By decreasing the funds available to small companies, they will be at an even greater disadvantage in paying for blocking, throttling, and paid prioritization. This in turn will lower their overall sales, shrinking profit margins further, and creating a negative feedback loop where the Restoring Internet Freedom Act imperils the survival of small businesses around the country.

¹⁸⁹ See *Oversight Hearing*, *supra* note 16, at 3 (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”).

¹⁹⁰ See *supra* notes 124-28 and accompanying text.

¹⁹¹ See OEHLER, *supra* note 130.

¹⁹² See Hamlett, *supra* note 129; Mariotti, *supra* note 131.

¹⁹³ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,748 (Apr. 13, 2015).

¹⁹⁴ See Hsu, *supra* note 115.

¹⁹⁵ Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,748 (Apr. 13, 2015).

¹⁹⁶ See Hsu, *supra* note 115.

¹⁹⁷ DOUBLECLICK, THE NEED FOR MOBILE SPEED (2017)

https://docs.google.com/viewerng/viewer?url=https://storage.googleapis.com/doubleclick-prod/documents/The_Need_for_Mobile_Speed_-_FINAL.pdf.

The most important distinction between the 2015 Open Internet Order and the Restoring Internet Freedom Act is reclassifying last-mile internet service providers as common carriers. This would subject internet service providers to the same statutory regulations as radio, telephone, and cable service providers.¹⁹⁸ In turn, this would give the FCC the authority to prevent internet companies from

Discriminat[ing] in charges, practices, classifications, regulations, facilities, or services for or in connection with like communication service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class of persons, or locality to any undue or unreasonable prejudice or disadvantage.¹⁹⁹

Regulation of natural monopolies in the form of utilities is often protested for perceived lack of efficacy in creating better cost outcomes.²⁰⁰ However, as discussed above, price is only part of the issue with efficient service, and price controls were not part of the 2015 Open Internet Order.²⁰¹ It is more accurate to look at regulation of natural monopolies as a balancing issue, that looks to find a middle ground between efficient service and low prices.²⁰² Furthermore, the “special public importance or necessity of the types of service supplied” is a factor in considering whether or not an industry should be regulated.²⁰³ Unlike water or heat, internet is not necessary for the survival of an individual. However, as discussed above,²⁰⁴ it is certainly necessary for the survival of the business. While a period of decreased internet access would be inconvenient for most, it would be destructive for businesses that rely on steady profits to remain in operation. This suggests that the natural monopoly of last-mile internet service belongs firmly in world of regulation.

Finally, when the excess profits and resource misallocations created by a natural monopoly are significant enough, they should be

¹⁹⁸ See 47 U.S.C. §202 (2012).

¹⁹⁹ *Id.*

²⁰⁰ Posner, *supra* note 88, at 550.

²⁰¹ See generally Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,738-39 (Apr. 13, 2015).

²⁰² WILLIAM S. COMANOR, *supra* note 188, at 523.

²⁰³ BONBRIGHT, *supra* note 100, at 8.

²⁰⁴ See *supra* notes 18-38 and accompanying text.

regulated.²⁰⁵ At the immediate, or even the neighborhood level, it may seem that the impact of the natural monopoly for last-mile internet service providers is minor. However, in the aggregate, this is untrue. As discussed above, the natural monopoly in broadband service extends to forty-three percent of Americans.²⁰⁶ With the average cost of broadband internet between \$25 and \$145 monthly,²⁰⁷ this market aggregates to billions of dollars annually.

To limit the inefficiencies created for small businesses by the natural monopolies, and to prevent the unfair advantages of throttling, paid prioritization, and blocking, the FCC should revise their stance on net neutrality. There are several ways that either the FCC, or another regulatory or lawmaking body, such as Congress, could ensure efficient, fair internet service to protect the interests of small businesses.

The first option would be to return to the 2015 Open Internet Order²⁰⁸ through the FCC, or to a similar legislative initiative through Congress. Under the D.C. Circuit's deference²⁰⁹ to the FCC's construction of Title II, there is unlikely to be a successful judicial challenge to reclassifying last-mile internet service providers. Moreover, Congress would be able to sidestep the issue completely, and simply statutorily reclassify broadband providers.

Firstly, the FCC could reclassify broadband internet service providers as common carriers under Title II of the Interstate Commerce Act. This would allow the FCC to reinstate their previous net neutrality regulations found in the 2015 Order.²¹⁰ Additionally, under common carrier classification, the FCC could take regulation of last-mile internet service providers a step further.

²⁰⁵ See BERG, *supra* note 90, at 28.

²⁰⁶ The FCC establishes a benchmark for broadband, as "advanced telecommunications capability," consisting of fixed broadband internet with speeds of at least 25 megabits per second ("Mbps") download speed, and 3 Mbps upload speed. See DEPLOYMENT INQUIRY, *supra* note 94, at 5, for a proposal that the FCC maintain the current benchmark for broadband internet. However, according to the FCC, only 57% of developed census blocks have access to more than one internet provider with speeds meeting that benchmark. INTERNET ACCESS STATUS, *supra* note 94, at 6.

²⁰⁷ *What is the Average Monthly Cost of an Internet Connection?*, REFERENCE, <https://www.reference.com/technology/average-monthly-cost-internet-connection-7bc36676f61e66ac> (last visited Dec. 8, 2018).

²⁰⁸ See Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738 (Apr. 13, 2015).

²⁰⁹ U.S. Telecom Ass'n v. Fed. Comm'n Comm'n, 825 F.3d 674 (D.C. Cir. 2016).

²¹⁰ See Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738 (Apr. 13, 2015).

In absence of action by the FCC, Congress could amend the Interstate Commerce Act, like it did with the Telecommunications Act of 1996, except this time to include last-mile internet providers as common carriers. If this proves too difficult, in the alternative Congress could adopt new legislation that simply directly regulates the ISPs while circumventing the common carrier classification altogether, allowing Congress to choose which policies to implement. This would resemble the existing regulatory framework surrounding broadcast and cable television, which are not classified as common carriers, but are burdened with many of the same responsibilities.²¹¹

Additionally, instead of mitigating the effects of local natural monopolies, Congress (or the FCC) could enact regulations that foster competition, and therefore limit the prevalence of the natural monopolies in the first place. As noted above, one of the causes of a local monopoly is when the initial upfront costs are high enough relative to expected profits to discourage initial investments.²¹² Regulations that seek to lower these investment costs for new competitors could serve this function. There is past precedent for such a scheme. In 1914, as part of a settlement avoiding an antitrust lawsuit, the government required the Bell Telephone Company to allow local competitors to connect to its long-distance network.²¹³

Following in the same vein, the Telecommunications Act of 1996 required telephone service providers who had established local networks to cooperate with potential competitors, by selling access connection through the established networks at a fixed rate.²¹⁴ In the past, the FCC required broadband providers to allow potential new competitors to lease their existing network connections, although the FCC abandoned this rule in 2005.²¹⁵ A similar policy could be a tool for the government to foster greater competition between last-mile internet providers, potentially allowing for market forces to regulate the remainder of net neutrality issues.²¹⁶ Mandatory interconnection

²¹¹ BENJAMIN, *supra* note 41, at 12.

²¹² See BERG, *supra* note 90 and accompanying text.

²¹³ BENJAMIN, *supra* note 41, at 190.

²¹⁴ *Id.* at 223; SHARON K. BLACK, TELECOMMUNICATIONS LAW IN THE INTERNET AGE 117-19 (2002).

²¹⁵ Jon Brodtkin, *Open Internet, But a Lack of Competition Among Providers*, N.Y. TIMES, Feb. 4, 2015, <https://www.nytimes.com/roomfordebate/2015/02/04/regulate-internet-providers/open-internet-but-a-lack-of-competition-among-providers>.

²¹⁶ See Michael Hiltzik, *Sonic is a Small ISP that Competes Brilliantly with the Big Guys—So They're Trying to Throttle its Business*, L.A. TIMES, Jul. 5, 2018, <https://www.latimes.com/business/hiltzik/la-fi-hiltzik-sonic-isp-20180706-story.html>, for a profile of a (comparatively) small last-mile provider that began by

would help eliminate the network effect, lowering the costs associated with competitive entry to natural monopolistic network economies.²¹⁷ Similarly, both federal and local governments could invest in public broadband networks, that would serve as competitors to existing natural monopolies.²¹⁸ When there is true competition between broadband providers, the natural monopoly, and the dangers it presents, disappears.

Overall, the belief that increased competition leads to better, faster, cheaper internet service²¹⁹ is a valid one²²⁰. The debate, therefore, is in how to promote this competition. Deregulation will not lead to increased competition under a natural monopoly; it will only lead to existing providers abusing that monopoly power.²²¹ Therefore, the only option is to enact some sort of regulation. There are many alternatives that can be endlessly debated, but the current framework is clearly inadequate.

Small businesses stand to lose the most from ineffective regulation of monopolistic last-mile internet service providers. With their vulnerability to changes in profit margins²²², their very existence is threatened by increased operating costs, or unfair blocking, throttling, and fast lane services that limit their competitive ability. Protecting the interests of small businesses allows us to protect the interests of the

leasing existing DSL infrastructure (under the telephone network sharing requirements of the Telecommunications Act of 1996) from AT&T, and is reinvesting its profits in developing an upgraded fiber network. *See also* Christine Dobby, *Big Internet Providers Must Open Fibre Networks to Competitors: CRTC*, THE GLOBE AND MAIL, July 22, 2015, <https://www.theglobeandmail.com/report-on-business/big-internet-providers-must-open-fibre-networks-to-competitors-crtc/article25633317/>, for a similar regulation enacted in Canada.

²¹⁷ BENJAMIN, *supra* note 41, at 9. *See also* BLACK, *supra* note 214, at 117-19, for a discussion of interconnectivity mandates in local telephone networks as created by the Telecommunications Act of 1996.

²¹⁸ *See* Mark Howell, *Saving Net Neutrality, One House at a Time*, WASH. POST (Apr. 22, 2018), https://www.washingtonpost.com/opinions/saving-net-neutrality-one-house-at-a-time/2018/04/22/a4de8a7e-39af-11e8-8fd2-49fe3c675a89_story.html?utm_term=.34d705c0aec5.

²¹⁹ *Oversight Hearing*, *supra* note 16, at 3 (statement of Ajit Pai, Chairman of the Federal Communications Commission) (“The Internet remains open and free, and we now have a regulatory framework in place that is encouraging the private sector to make the investments necessary to bring better, faster, and cheaper broadband to more Americans.”);

²²⁰ *See* Howell, *supra* note 218; and Hiltzik, *supra* note 216, for examples of increased competition among last-mile internet service providers, leading less expensive service, where the competition arose from either regulation or direct investment by the government.

²²¹ *See* BENJAMIN, *supra* note 41, at 615.

²²² *See supra* notes 129-33 and accompanying text.

middle class,²²³ and the economy in general.²²⁴ To best protect these interests, the FCC should develop a new regulatory framework for last-mile internet service providers.

²²³ See William Dunkelberg, *Representing the Middle Class*, FORBES (Mar. 20, 2014), <https://www.forbes.com/sites/williamdunkelberg/2014/03/20/representing-the-middle-class/#3909f6af14b7>, describing the importance of small businesses ownership and employment among the American middle class.

²²⁴ See *supra* notes 12-15 and accompanying text.